

accordingly respectfully request that the Primary Examiner reconsider the final rejection and withdraw the finality of the rejection pursuant to MPEP § 706.07(d).

#### **Objection to the Drawings**

The Examiner has objected to the drawings because of informalities. Applicants will submit formal drawings when the application has been allowed.

#### **Withdrawal of Rejection Under 35 U.S.C. § 112**

Applicants thank the Examiner for withdrawing the rejection of claim 1 under 35 U.S.C. § 112 because the term “hierarchical attribute value pair data structure” is clearly defined in the specification.

#### **Examiner's Response to Applicants' Previous Arguments**

The Examiner argues that Applicants' arguments filed in the RESPONSE TO OFFICE ACTION DATED JANUARY 16, 2002 (Paper no. 8), fails to comply with 37 CFR § 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes from them from the references. Applicants respectfully traverse this allegation for at least the following reasons.

In the OFFICE ACTION dated January 16, 2002 (Paper no. 4), the Examiner rejected claims 1-148 under 35 U.S.C. § 103(a) as being unpatentable over United States Patent no. 5,878,223 issued to Becker et al. (the “Becker reference”) in view of United States Patent no. 6,012,083 issued to Savitzky et al. (the “Savitzky reference”). Specifically, the Examiner alleged that the Becker reference teaches “a network,” “using profiles to determine the content to send to a user,” and “transmitting selected information.” See Paper no. 4, page 3, paragraph 8, lines 3-5. The Examiner also alleged that the Savitzky reference teaches “a web server to transform the requests from the Web client,” and specifically teaches that “a feature calculator generates a feature list for a transaction by scanning the data element” and that “the user typically accesses

agency by some action taken with a Web client to access a Web server" that "will result from implementing his network system." See Paper no. 4, page 3, paragraph 8, lines 8-13. The Examiner further made a blanket allegation that the Becker reference teaches claims 1, 11, 25, 27, 28, 32-34, 44, 46, 56, 59, 65, 67-70, 73-74, 130-32, and 136-38 except for explicitly teaching a "user profile." The Examiner, however, never pointed out where either the Becker reference or the Savitzky reference teach or suggest a "hierarchical attribute value pair data structure." Under MPEP § 2143, the basic requirements of a *prima facie* case of obviousness, the Examiner must establish that (1) there is some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the teachings, (2) there must be a reasonable expectation of success, and (3) the prior art reference (or references when combined) must teach or suggest all the claim limitations. Thus, the Examiner failed to establish a *prima facie* case of obviousness in the Office Action dated January 16, 2002 (Paper no. 4) because the Examiner failed to show that either the Becker reference or the Savitzky reference teach or suggest all the claim limitations.

Applicants responded to the rejection from Paper no. 4 in the RESPONSE TO OFFICE ACTION DATED JANUARY 16, 2002 (Paper no. 8) by canceling claims 142-48 and arguing that the cited references failed to teach or suggest a "hierarchical attribute value pair data structure," which was required by each of the remaining claims 1-141. Thus, Applicants fully responded to the rejection by showing that the Examiner had failed to produce a *prima facie* case of obviousness with respect to each of the pending claims 1-141. Where the Examiner has failed to produce a *prima facie* case, the Applicant is under no obligation to submit evidence of nonobviousness. See MPEP § 2142. Thus, Applicants fully responded to the rejection of the OFFICE ACTION dated January 16, 2002 (Paper no. 4).

In response to the Applicants' arguments showing that the Examiner failed to produce a *prima facie* case, the Examiner, *for the first time*, asserted that the "[t]he broad claim language is interpreted on its face and based on this interpretation the claims have been rejected," that the Becker reference "teaches a hierarchical attribute value pair data structure," and that the "feature

calculator" disclosed in the Savitzky reference "also reads on a hierarchical attribute value pair data structure." See Paper no. 9, page 4, paragraph 14; page 3, paragraph 7, lines 4-5; and page 3, paragraph 7, lines 9-12, respectively. Thus, the Examiner is asserting that Applicants failed to respond fully to a newly imposed ground of rejection made *for the first time* in response to Applicants' arguments made in Paper no. 8. Accordingly, Applicants' attorney respectfully requests that the Examiner reconsider and withdraw his comment that Applicants' arguments in Paper no. 8 failed to comply with 37 CFR § 1.111(b).

### **Rejection Under 35 U.S.C. §103**

The Examiner has rejected claims 1-141 under 35 U.S.C. § 103(a) as being unpatentable over United States Patent No. 5,878,223 issued to Becker et al. (the "Becker reference") in view of United States Patent No. 6,012,083 issued to Savitzky et al. (the "Savitzky reference"). Applicants respectfully traverse this rejection for at least the following reasons.

The Examiner argues that, with respect to claims 1, 11, 25, 27, 28, 32-34, 44, 46, 56, 65, 67-70, 73-74, 130-32, and 136-38, the Becker reference teaches a hierarchical attribute value pair data structure at col. 9, lines 1-10, which provides as follows:

Referring now to FIG. 5A, illustrated is an example prediction table 135, 160 of the type described above. This table is a single-level prediction table, consisting of an n-by-n matrix where n 522 is the number of pages to be tracked. The size, n, may change dynamically as more pages are browsed by a user(s) of the systems in FIGS. 2 and 3. The incrementing of n is discussed in FIG. 6,. The table will be small and grow in size as more users use the systems in FIGS. 2 and 3. Consequently, the table becomes more useful, i.e., reflective of usage patterns, the more the systems are used to browse the web.

(Emphasis added.) In the section of the Becker reference relied upon by the Examiner, the Becker reference provides only a single-level prediction table, i.e., not a hierarchical data structure. As stated in Paper no. 9, in a hierarchical attribute value pair data structure, the attribute value pair is independent of the hierarchical structure. Thus, the individual value pairs

may be shared by different data structure hierarchies to define different entities, e.g., an individual or a group of individuals sharing the same piece of information. Thus, the Becker reference clearly does not provide a hierarchical attribute value pair data structure, wherein the attribute value pair is independent of the hierarchical structure.

The Examiner further argues that the Savitzky reference "teaches that 'a feature calculator generates a feature list for a transaction by scanning the data element', col. 6, lines 37-39 based upon the user's requests, and an agent 'modifies them according to filtering rules before documents are returned to a client', col. 11, lines 32-34 which also reads on a hierarchical attribute value pair data structure." Applicants respectfully suggest that a "feature calculator" that generates a list of features for a transaction, such as whether the transaction is a file request, whether it is a response to a request, etc., does not relate to creating a value pair data structure nor does it relate to creating a hierarchy thereof. Rather, the "feature calculator" disclosed in the Savitzky reference teaches the exact opposite of creating a hierarchical attribute value pair data structure, i.e., it creates a summary of data contained in a transaction. Further, with respect to col. 11, lines 32-34 of the Savitzky reference, the "filter agent" merely filters out data from a document such as unwanted detail or objectionable material. Thus, the sections of the Savitzky reference relied upon by the Examiner do not relate in any way to a hierarchical attribute value pair data structure.

Applicants have also amended independent claims 1, 11, 26, 32, 82, 106, 130, and 136, from which claims 2-10, 12-25, 27-31, 33-81, 83-105, 107-129, 131-135, and 137-141 depend, to further define the term "hierarchical attribute value pair data structure" to further specify those characteristics of a hierarchical attribute value pair data structure previously set forth in the specification of the application and identified in Paper no. 8 in response to the Examiner's rejection of claim 1 under 35 U.S.C. § 112 of Paper no. 4. Specifically, Applicants have amended the independent claims to require the hierarchical attribute value pair data structure to "wherein the attribute value pair is independent of the hierarchical structure." No new matter has been added. Applicants note that the claims, as amended, are now commensurate in scope with

the previous arguments made in Paper no. 8 and, accordingly request the Examiner to reconsider the arguments made in Paper no. 8 and not considered pursuant to paragraphs 14-17 of Paper no. 9.

Each of the pending independent claims 1, 11, 26, 32, 82, 106, 130, and 132, as well as the remaining dependent claims, each require a hierarchical attribute value pair data structure, wherein the attribute value pair is independent of the hierarchical structure. For at least these reasons, Applicants believe that the pending claims 1-141 are in a condition for allowance. Each independent claim and dependent claim also contains further limitations. The undersigned reserves the right to traverse the Examiner's characterization of the Becker reference and the Savitzky reference with respect to any further limitations not specifically argued herein. Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw the rejection of claims 1-141, and that claims 1-141 be allowed.

Further, the Examiner has failed to provide a *prima facie* case of obviousness for many of the pending claims. Under MPEP § 2143, the Examiner must establish that the references when combined teach or suggest all the claim limitations. With respect to claim 11, for example, the Examiner has not shown where in either the Becker reference or the Savitzky reference the claim limitation of receiving information for use in generating a user profile is shown. Specifically, the Savitzky reference, for example, merely specifies a personal information agency that acts as a filter for how documents are to be presented to a user. The Examiner has not shown where either of the references show receiving information for use in generating a user profile. Further, the Examiner has failed to show the claim limitation of specifying in the medium, using the information, an identification of a machine, an address of a machine, and user-profile information for use in determining a type of content to transmit to the machine. Thus, the Examiner has failed to establish a *prima facie* case of obviousness for claim 11.

Applicants respectfully suggest that the Examiner has failed to show all the limitations of many of the other pending claims. For example, with respect to claim 25, the Examiner has

failed to show where in either the Becker reference or the Savitzky reference the claim limitation of specifying in the medium an address of a personal computer, a television, a cable box, a satellite box, a video game console, or a personal digital assistant. Further, with respect to claim 32, the Examiner has failed to show where in either the Becker reference or in the Savitzky reference the claim limitation of a transmit module for specifying in the data structure an identification of the machine, an address of the machine, and user profile information for use in determining a type of content to transmit to the machine. Further, with respect to claim 82, the Examiner has failed to show where in either of the Becker reference or the Savitzky reference the claim limitations of a means for receiving information for use in generating a user profile or a means for specifying, in the medium, based on the information received, a machine, an address associated with the machine, and user profile information for use in determining a type of content to transmit to the machine. These are merely examples of claims for which the Examiner has failed to establish a *prima facie* case of obviousness. Accordingly, Applicants respectfully request that the Examiner provide a *prima facie* case of nonobviousness for each of the pending claims.

### CONCLUSION

In view of the preceding remarks, reconsideration and allowance of all pending claims are respectfully requested. If any points remain at issue, which the Examiner feels could best be resolved by telephone interview, he is urged to contact the attorney below.

Dated this 8<sup>th</sup> day of July, 2002.



Respectfully submitted,

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**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

1. An article of manufacture for compiling and maintaining information for use in routing and transmitting content to a machine via a network, comprising:

a computer-readable medium including information for use in transmitting content to a machine;

wherein the medium includes fields for specifying an identification of the machine, an address of the machine, and user-profile information for use in determining a type of content to transmit to the machine, the user-profile information being specified in an hierarchical attribute value pair data structure, the hierarchical attribute value pair data structure further comprising a data structure wherein the attribute value pair is independent of the hierarchical structure.

11. A method for compiling and maintaining information for use in routing and transmitting content to a machine via a network by specifying particular fields within a computer-readable medium, comprising:

receiving information for use in generating a user profile;

specifying in the medium, using the information, an identification of a machine, an address of the machine, and user-profile information for use in determining a type of content to transmit to the machine; and

storing the user-profile information in an hierarchical attribute value pair data structure, the hierarchical attribute value pair data structure further comprising a data structure wherein the attribute value pair is independent of the hierarchical structure.

26. A method of accessing information for use in routing and transmitting content to a machine via a network, comprising:

establishing a network connection from a machine;

accessing via the network connection an hierarchical attribute value pair data structure stored in a computer-readable medium, the hierarchical attribute value pair data structure further comprising a data structure wherein the attribute value pair is independent of the hierarchical structure; and

transmitting information via the network connection for specifying in the data structure an identification of the machine, an address of the machine, and user-profile information for use in determining a type of content to transmit to the machine.

32. An apparatus for accessing information for use in routing and transmitting content to a machine via a network, comprising:

a network module for establishing a network connection from a machine;

an access module for accessing via the network connection an hierarchical attribute value pair data structure stored in a computer-readable medium, the hierarchical attribute value pair data structure further comprising a data structure wherein the attribute value pair is independent of the hierarchical structure; and

a transmit module for transmitting information via the network connection for specifying in the data structure an identification of the machine, an address of the machine, and user-profile information for use in determining a type of content to transmit to the machine.



82. An apparatus for compiling and maintaining information for use in routing and transmitting content to a machine via a network:

a means for receiving information for use in generating a user profile;

a means for specifying in the medium, based on the information received, a machine, an address associated with the machine, and user-profile information for use in determining a type of content to transmit to the machine; and

a means for storing the user-profile information in an hierarchical attribute value pair data structure, the hierarchical attribute value pair data structure further comprising a data structure wherein the attribute value pair is independent of the hierarchical structure.

106. A computer-readable medium containing programming instructions for controlling a computer system which routes and transmits content to a machine via a network, by:

receiving information for use in generating a user profile;

specifying, using the information, an identification of a machine, an address of the machine, and user-profile information for use in determining a type of content to transmit to the machine; and

storing the user-profile information in an hierarchical attribute value pair data structure, the hierarchical attribute value pair data structure further comprising a data structure wherein the attribute value pair is independent of the hierarchical structure.

130. A computer-readable medium containing programming instructions which control a computer system, the computer system being used to route and transmit content to a machine via a network, by:

establishing a network connection to a machine;  
accessing via the network, a hierarchical attribute value pair data structure, the hierarchical attribute value pair data structure further comprising a data structure wherein the attribute value pair is independent of the hierarchical structure; and  
transmitting information, via the network connection, which specifies an identification of the machine in the data structure, an address of the machine, and user-profile information for use in determining a type of content to transmit to the machine.

136. An apparatus for accessing information for use in routing and transmitting content to a machine via a network, comprising:

a means for establishing a network connection to a machine;  
a means for accessing, via the network connection, a hierarchical attribute value pair data structure stored in a computer-readable medium, the hierarchical attribute value pair data structure further comprising a data structure wherein the attribute value pair is independent of the hierarchical structure; and  
a means for transmitting information via the network, wherein the information is specified in the data structure and includes an address of the machine and user-profile information; wherein the user-profile information is used to determine a type of content to transmit to the machine.